

1 WHAT IS CLAIMED IS:

- 1 1. An apparatus for processing substrates, comprising:
2 (a) a chamber having:
3 (i) a sidewall;
4 (ii) a lid disposed at one end of the sidewall; and
5 (iii) a bottom disposed at the opposite end of the sidewall;
6 (b) a substrate support member cantilever mounted on the sidewall;
7 (c) one or more gas inlets disposed through one or more of the sidewall and the lid to
8 admit gas into the chamber;
9 (d) one or more gas inlets disposed through one or more of the sidewall and the lid to
10 admit one or more cleaning gases into the chamber; and
11 (e) an exhaust port disposed in the bottom of the chamber.
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- 1 2. The apparatus of claim 1 wherein the lid comprises a dome comprised of a dielectric
2 material.
- 1 3. The apparatus of claim 2 wherein the dome comprises a material selected from the group
2 consisting of Al_2O_3 , AlN , SiO_2 or combinations thereof.
- 1 4. The apparatus of claim 3 wherein the dome further comprises a generally annular
2 sidewall and a generally planar top.
- 1 5. The apparatus of claim 2 further comprising a heat transfer assembly disposed adjacent to
2 the lid.

6. The apparatus of claim 5 wherein the heat transfer assembly comprises one or more heat transfer plates.

7. The apparatus of claim 6 wherein the one or more heat transfer plates comprise a heating plate and a cooling plate.

8. The apparatus of claim 7 wherein the heating and cooling plates are comprised of a thermally conductive material.

9. The apparatus of claim 8 wherein the thermally conductive material is selected from the group consisting of AlN, SiN, Al or combinations thereof.

10. The apparatus of claim 9 wherein the heating plate includes a resistive heating element disposed therein.

11. The apparatus of claim 10 wherein the cooling plate includes one or more fluid passages disposed therein.

12. The apparatus of claim 11 wherein a heat conducting member is disposed between the heating plate and the cooling plate.

13. The apparatus of claim 12 wherein the heat conducting member comprises a heat transfer material such as grafoil, chromerics, or combinations thereof.

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- 1 14. The apparatus of claim 13 wherein the heat conducting member comprises one or more
2 pucks disposed between the heating and cooling plates.